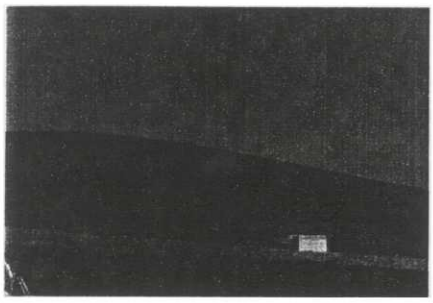
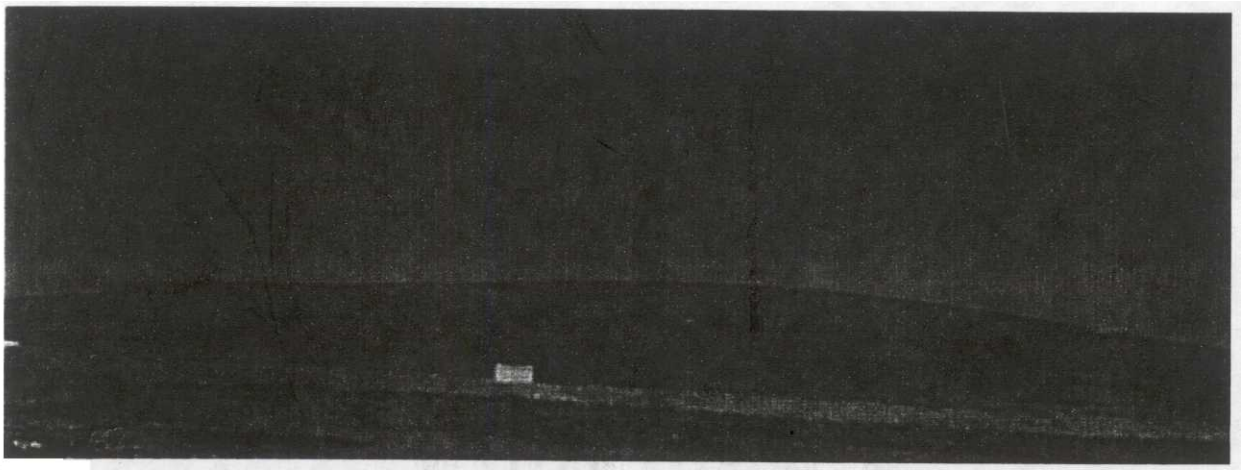
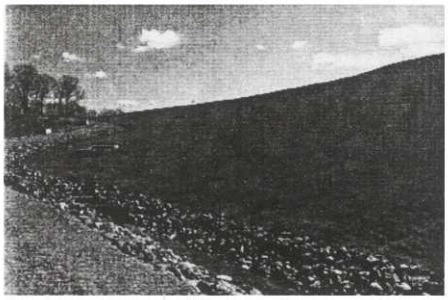


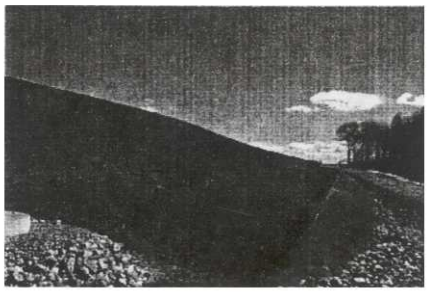
LAUREL PARK LANDFILL SUPERFUND SITE



Five Year Review

September 1998

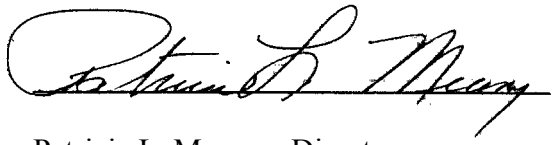




Five Year Review

Laurel Park Landfill Superfund Site
Naugatuck, Connecticut

Prepared By:
United States Environmental Protection Agency
Region I – EPA New England



9/11/98

Patricia L. Meaney, Director
Office of Site Remediation and Restoration

Date

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FIVE YEAR REVIEW

INTRODUCTION

A. Statutory Requirements

A five- year review was conducted of the Remedial Actions selected for the for the Laurel Park Landfill Superfund Site in Naugatuck, Connecticut.

In accordance with Section 121 (c) of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), as amended, and Section 300.430(f) (4) (ii) of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), reviews are mandated for all remedial actions that result in any hazardous substances remaining at a site. Reviews are to be conducted at least every five years after the initiation of the remedial action to assure that human health and the environment are being protected by the implemented remedial action.

EPA has established a three-tier approach to conducting five-year reviews, the most basic of which provides a minimum protectiveness evaluation (Level I Review) . The second and third levels of review (Levels II and III) are intended to provide the flexibility to respond to varying Site-specific considerations and employ further analysis of the Site conditions. In all but a relatively few cases where Site-specific circumstances suggest a more comprehensive level of review, the EPA has determined that a Level I review will be appropriate. A Level I review was required at the Laurel Park Landfill Site to confirm that the remedial action, as presented in the 1988 Record of Decision (ROD), adequately protects the public health and the environment.

B. Scope of the Five Year Review

Specific tasks performed as part of this five- year review included:

- Document Review:

  Applicable Site- related documents were reviewed to obtain familiarity with the Site history, general Site status and all remedial actions conducted since the initial construction of the waterline (which represents the start of the five- year review cycle) . The following documents or files were examined:

  - ✓ Record of Decision Summary, Laurel Park, Inc. Site, Naugatuck, Connecticut, June 30, 1988.
  - ✓ Laurel Park, Inc. Statement of Work for Remedial Design and Remedial Action Appendix II of the Consent Decree , entered on or after September 16, 1992.
  - ✓ Project Operations Plan (POP) , and Appendices, Laurel Park, Inc. Site, Naugatuck, Connecticut, prepared by Conestoga- Rovers & Associates (CRA) , dated May 1996
  - ✓ 100% Remedial Design Report, and Appendices, Laurel Park, Inc. Site, Naugatuck, Connecticut, prepared by Conestoga- Rovers & Associates (CRA) , dated May 1996.
  - ✓ Operations and Maintenance Instructions, and Appendices, Laurel Park, Inc. Site, Naugatuck, Connecticut, prepared by Conestoga- Rovers & Associates (CRA) , dated January 1998.
  - ✓ Long Term Monitoring Plan (Revision I) , and Appendices, Laurel Park, Inc. Site, Naugatuck, Connecticut, prepared by Conestoga- Rovers & Associates (CRA) , dated January 1998.
  - ✓ Final Remedial Construction Report, and Appendices, Laurel Park, Inc. Site, Naugatuck, Connecticut, prepared by Conestoga- Rovers & Associates (CRA) , dated February 1998.

- Site Visits :

EPA’s oversight personnel were at Laurel Park Landfill throughout the construction, July 1996 through March 1998. Additional v isits were conducted by EPA, Connecticut Department of Environmental Protection (CTDEP) , and EPA’s oversight contractor (Nobis Engineering) throughout Spring and Summer 1998 to observe the conditions of the landfill cap, the leachate collection system, the groundwater extraction system, the sedimentation basins and general Site conditions. EPA and CTDEP conducted a pre-final inspection on June 23, 1998, and a final inspection on July 24, 1998 and and found that human health and the environment are being protected by the implemented remedial action.

II. SITE DESCRIPTION AND BACKGROUND

A. Site Description

The Laurel Park Landfill on Huntington Hill in the Borough of Naugatuck, Connecticut (Site) is situated on approximately 26 acres of land owned by Laurel Park, Inc. The Site consists of a landfill that was active from the late 1930s until 1987. The landfill is classified primarily as a sanitary landfill, but does contain approximately 20 percent industrial waste. Operational problems at the landfill were reported in the early 1960's. Complaints included chemical spills on roads leading to the landfill, large quantities of black acid smoke, odors, and blowing litter. Between 1965 and 1966, the Connecticut Department of Health investigated reports of contaminated surface water. In 1983, the EPA added the Site to the National Priorities List (NPL), by publication in the Federal Register on September 8, 1983.

B. Background

The Remedial Investigation (RI) and Feasibility Study (FS) was conducted from 1985 to 1987. The RI and FS reports were issued in February 1987 and May 1988, respectively. The RI and FS determined that the existing leachate collection system was only partially effective in capturing leachate. The landfill is directly underlain by fairly weathered and fractured bedrock with the depth to bedrock varying from zero to approximately 70-feet below the land surface around the perimeter of the landfill. Beneath the fairly weathered and fractured bedrock lies competent bedrock intermittently fractured by two fracture sets. The shallow bedrock has been identified as the primary migration pathway, with the deeper bedrock as the secondary migration pathway. The primary contaminants of concern affecting groundwater, soil, surface water, and sediments included VOCs, organics, and metals. Contaminants were detected in both on-Site and off-Site wells. Beyond the boundary of the landfill, contaminants were found in the groundwater in both the glacial till and bedrock formations. Preliminary landfill gas monitoring during the RI indicated the presence of methane within the landfill.

In May 1987, the EPA entered into an Administrative Order on Consent (AOC) with the State of Connecticut, the Borough of Naugatuck and the Uniroyal Chemical Company to design and install a waterline. This waterline was Operable Unit 1 for the Site.

In June 1988, the Regional Administrator for EPA issued a Record of Decision (ROD) which presented the selected Remedial Action (RA) for the Site. In April 1991, the Administrative Order by Consent (AOC) for the RD became effective and was subsequently incorporated in the Consent Decree for the RD/ RA entered with the court in August 1992. The Site is currently PRP-Lead.

III. REMEDIAL OBJECTIVES AND REMEDIAL ACTIONS

The selected remedy for the Site included both source control and management of migration (or groundwater control) components:

- the extension of an alternate water supply to area residents;
- grading and placement of a RCRA cap over the entire landfill;
- leachate collection/ groundwater extraction system;
- treatment of leachate and contaminated groundwater at the Naugatuck Water Pollution Control Facility (NWPCF);
- monitoring;
- institutional controls

Completion of the extension of an alternate water supply to area residents was installed along Hunters Mountain Road in the spring of 1989 and individual homes near the Site were provided access to municipal drinking water. The water supply protects human health by preventing exposure to contaminated groundwater. Additionally a dedicated sewer line was installed in December 1989 along Andrew Ave (the Andrew Ave leachate transport line) , to the sanitary interceptor sewer on Rubber Ave to provide leachate discharge to and treatment at the Naugatuck NWPCF.

Grading and placement of a RCRA cap over the entire landfill eliminated direct human exposure to the wastes and contaminated soil in a relatively short time. The major purpose of the cap was to de-water waste and reduce leachate generation, thus reducing groundwater contamination. All engineering studies were completed, and the landfill cap design completed in 1996. RA construction activities commenced in 1996.

The leachate collection/groundwater extraction systems at the Site included continued operation of the existing leachate collection system and rehabilitation to maximize its effectiveness. A new leachate collection/groundwater extraction system installed around the perimeter of the landfill was constructed to minimize the off-Site migration of landfill generated contaminants. The objective of the new leachate collection/groundwater extraction system was to extract leachate not intercepted by the existing leachate collection system, extract highly contaminated groundwater to the bottom of the shallow bedrock in the immediate vicinity of the landfill, and to supplement the cap in dewatering the landfill materials. Construction of the leachate collection system and installation of the groundwater extraction wells was completed during the 1996 construction season. The leachate collection system was cleaned and video-inspected and the groundwater extraction system completed (including pumps and associated appurtenances) during the 1997 construction season. The leachate collection system and the groundwater extraction systems are presently being operated and maintained by the PRPs.

Leachate and extracted groundwater is being conveyed to the NWPCF. Discharge of leachate and groundwater into the sanitary sewer requires compliance with applicable State of Connecticut permits.

Construction of a RCRA cap over the entire landfill was completed in 1998. EPA and the Connecticut Department of Environmental Protection (CTDEP) conducted a Final Inspection on July 24, 1998.

Monitoring of the environmental media commenced in 1998 and will be performed for at least 30 years and will comply with the RCRA groundwater monitoring requirements under 40 CFR Part 264 Subpart F. The objectives of monitoring are to monitor the effectiveness of the remedy, monitor the bedrock aquifer relative to groundwater standards and institutional controls, and identify further impacts to public health and the environment.

RA activities that remain to be completed for the Laurel Park, Inc. Site include approval of the final operations and maintenance (O& M) plan, approval of final as-built plans, long term monitoring plan, and landfill gas monitoring plan, preparing the interim RA report, and preparing the Final Close Out Report.

IV. RECOMMENDATIONS

The PRPs are currently working with EPA and CTDEP to complete the final operation and maintenance plan, long term monitoring plan, as- built plans, landfill gas monitoring plan, and final remedial construction report.

The PRPs began performing interim operation and maintenance activities at the Site in November 1997. Final O& M activities will commence once EPA approves the final O& M Plan. The PRPs have initiated and continue to monitor the environmental media.

No further recommendations were identified by this five- year review.

V. STATEMENT OF PROTECTIVENESS

EPA certifies that the remedy selected for this Site remains protective of human health and the environment.

VI. NEXT FIVE-YEAR REVIEW

The next five year review will be conducted by September 2003.